



Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) Publication number:

**0 117 564
A1**

(12)

EUROPEAN PATENT APPLICATION

(21) Application number: 84102074.6

(51) Int. Cl.: **F 28 D 19/04**

(22) Date of filing: 28.02.84

(30) Priority: 28.02.83 JP 30853/83

(71) Applicant: **Berner International Co., Ltd., No. 9-15,
Akasaka 1-chome, Minato-ku Tokyo (JP)**

(43) Date of publication of application: 05.09.84
Bulletin 84/36

(72) Inventor: **Berner, Erling, Loretohöhe 5, CH-6300 Zug
(CH)**

(84) Designated Contracting States: **CH DE FR GB IT LI SE**

(74) Representative: **Patentanwälte Henkel, Pfénning, Feller,
Hänzel & Meinig, Möhlstrasse 37,
D-8000 München 80 (DE)**

(54) **Rotary-type heat exchanger.**

(57) A rotary-type heat exchanger comprises a rotor having heat insulation in the direction of its diameter, a casing for said rotor, an entrance of said casing to guide the high temperature incoming gas to be used for the heat exchange exclusively toward said rotor except for the outer periphery thereof and the areas close to the shaft of said rotor, a heat insulation being treated on the inner wall of said entrance, a sealing member for high temperature being provided on the side toward said rotor of said entrance to keep the gas leakage minimum, an exhaust gas outlet of said casing being provided on the side opposing to said entrance to guide all the exhaust gas passed through said rotor to outside, a sealing member being provided on the side toward said rotor of said exhaust gas outlet to keep the gas leakage minimum, an outer fresh gas inlet of said casing to guide outer fresh gas into said casing, an outlet port of said casing being provided on the side opposing to said outer fresh gas inlet to guide the heated gas in said rotor to outside, and a heat insulation being treated on the inner wall of said outlet port.

EP 0 117 564 A1

1 7. Claims:

(1) A rotary-type heat exchanger which is characterized in that a rotor having heat insulation in the direction of diameter is provided in the casing, and said casing being
5 provided with an entrance of which inner wall is treated to have heat resistance to guide the gas of high temperature to be used for the heat exchange exclusively toward the rotor except for the areas close to the shaft and the outer periphery thereof, a sealing member for high temperature
10 which is provided on the side of the rotor in said entrance to keep the gas leakage minimum, an exhaust gas outlet which is provided on the side opposing to said entrance to guide all the gas which has been passed through the rotor outside, a sealing member which is provided on the side of the rotor
15 in said exhaust gas outlet to keep the gas leakage minimum, an outer gas inlet which guides outer gas into the casing, and an outlet port of which inner wall is treated to have insulation and which is provided on the side opposing to said outer gas inlet to guide the gas which has been heated
20 in the heat exchange to outside.

(2) The rotary-type heat exchanger as claimed in Claim 1 which is further characterized in that a ring having a diameter substantially identical to that of the rotor and
25 being provided coaxially thereto on the side of the outlet for heated gas and on the inner surface of the casing and

1 in that a sealing member being provided on the side of the
rotor of said ring to have a diameter larger than that of
the heated portion so that it can keep the gas leakage
minimum and enclose the rotor.

5

(3) The rotary-type heat exchanger as claimed in Claim 1,
the rotor being a ceramic made honeycomb structure.

(4) The rotary-type heat exchanger as claimed in Claim 2,
the rotor being a ceramic made honeycomb structure.

10

Fig. 1

1/1

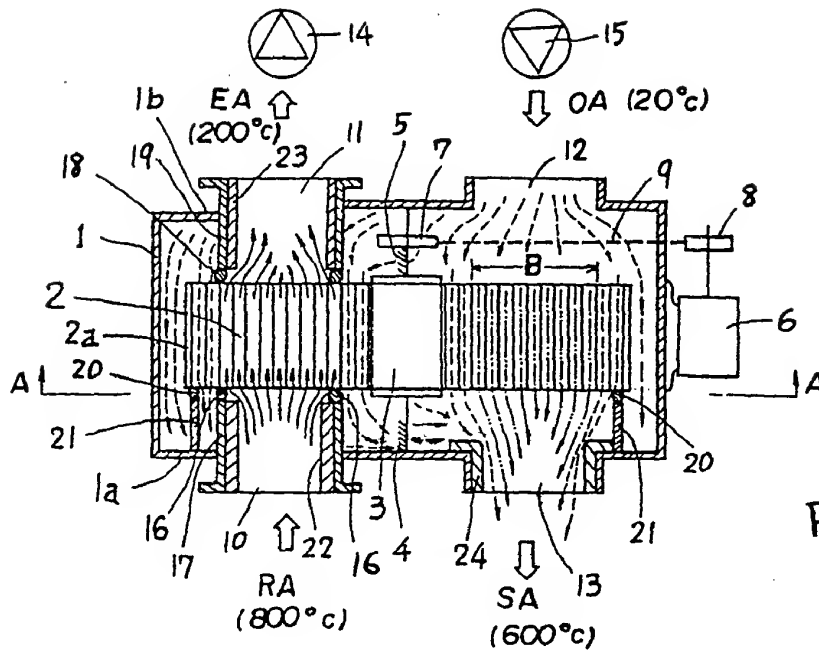


Fig. 3

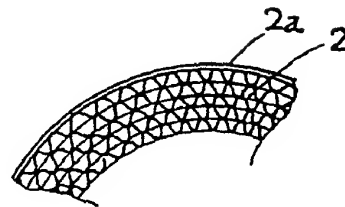


Fig. 2

